Claims

1. A method for reducing interference between users of a carrier signal in which there are users with a high bit rate and users with a lower bit rate in which first the higher bit rate users have their interference reduced by hybrid interference cancellation (HIC) and then the interference between the other lower bit rate users reduced by HIC.

2. A method as claimed in claim1 in which the signals selected for partial PIC are the most reliable users as herein defined.

3. A method as claimed in claim 1 or 2 in which the regenerated signals are cancelled from the received signals at the baseband.

4. A method as claimed in claim 1 or 2 in which the cross correlations between the cancelled and the remaining users are cancelled from matched filter outputs.

5. A method as claimed in any one of the preceding claims in which the cancellation of the signals of the high bit rate users is substantially complete

6. A method as claimed in claim 5 in which the cancellation of the signals of the high bit rate users is carried out using a complex HIC configuration.

7. A method as claimed in any one of the preceding claims in which the total number users is $K = H + L$, where H is the number of high bit rate users and L is the number of low bit rate users and (i) using an HIC with the best BER among HIC configurations to cancel the signals of the high bit rate users and then (ii) applying HIC to cancel the interference among the low bit rate users.

8. A method as claimed in claim 7 in which in which the signals of the high bit rate users are cancelled using a H-H-1 configuration and then applying L-P-S to cancel the signals among the low bit rate users.